Editorial

Mother Earth or Mother Water

"Whiskey's for drinking, water's for fighting over" — Mark Twain

Though water covers more than 70 per cent of our blue planet, 97 per cent is salty and non-potable. Of the remaining three per cent, two percent is locked up in snow and ice, leaving only one per cent as liquid surface and ground water for use. We use two-third of this one per cent to grow our food.

Decades of misuse, overuse, and pollution of water has left us with a deep water crises. If immediate steps for water conservation are not taken, climate change will further aggravate this crises. Our water demands, and the millions of daily mutinies that we see in our cities, towns and villages everyday over water, will keep growing, as human population adds by 83 million every year. As our country develops, water demands will grow. Water use rises with wealth and changes in life-style. For example, an American uses 100 gallons of water daily, while in dry poor countries, it may be as low as 5 gallons. Forty-six per cent of individuals on our planet do get piped water up to their homes. In some countries, women have to walk up to 8-10 km every day to fetch water. In many towns and villages of India, people have to survive on limited 'tanker-water' as they have already polluted or depleted their water sources.

Human civilization is closely linked to freshwater ecosystems. Cities, towns, villages, industries, thermal power plants, chemical plants, agriculture fields are concentrated alongside water-bodies. Through decades of neglect, the Ganga, Jamuna, Godavari, Sutlej, Sabarmati are dying due to untreated sewage, non-degradable litter, industrial effluents and chemical pollution. For over thousand years, citizens of Delhi received potable water from the Jamuna and wells, but now drinking water for Delhi comes from the Ganga and Beas rivers 400 km away. Similarly, Hyderabad and Secundrabad get potable water from the Krishna 116 km away and Manjira river, 60 km away. The Hussain Sagar built for the twin-cities is now heavily polluted and its water is unfit for human consumption. There are many such examples all over India.

A holistic river-basin approach, with conservation and sustainable-use in mind, should be developed for all our rivers and waterbodies. But looking at the result of the Ganga Action Plan, now renamed the National Ganga River Basin Authority, it appears that we have a long way to go. During the last two decades, Rs. 36,000 crores have been spent on cleaning the Ganga, but the river is as dirty as ever. There is a lack of coordination between the irrigation, hydropower, rural development and environment ministries. Most importantly, there is lack of appreciation of the ecological and environmental role of our rivers and natural water-bodies. Unless we change our thinking, engineering solutions to ecological problems will not save our water resources.

We have to decide whether we want engineering solution to our water crises – megadams, long canals or pipelines, new technology to extract depleting underground fossil water – or, conservation approaches which restore depleted reservoirs and aquifers, protect aquatic ecosystems, stop pollution of rivers, covers catchment areas in natural vegetative, starts sustainable rainwater harvest, and result in equitable and fair distribution of water for all communities, both human and non-humans (plants and animals). We though require new technologies in agriculture (e.g. micro-sprinklers replacing flood irrigation, developing dryland-tolerant crops), pollution cleanup and quick treatment of wastewater, we also have to maintain the minimum ecological flow in all rivers which is required for the basic ecological functions of a river. We have to remember that we cannot achieve 8-10 per cent economic growth in the coming years which the Government of India is hoping, without cleaning our river systems.

Rivers, wetlands and swamps make up less than 0.3 per cent of fresh water and less than 0.01 per cent of all the water on Earth. Yet these waters are home to as many as 1,26,000 of the world's animal species. Almost 43 per cent of the 30,000 known species of fish live in freshwater lakes and rivers. India has about

2,500 fish species, of which 930 species are freshwater inhabitants. Many species have become extinct or locally extinct due to pollution, destruction of their habitat and introduction of invasive species. According to IUCN, freshwater animals are disappearing at a rate four to six times faster than animals on land or at sea, and freshwater fishes are much more threatened with extinction than the sea fishes.

The Himalayan glaciers, covering millions of square kilometers, contain the largest volume of ice outside the polar regions. One third of the human population, nearly two billion people depend on these glaciers as they feed on Asia's famous rivers such as the Ganges, Brahmaputra, Mekong and Yangtze. Climate change and heating of our Planet is threatening these glaciers. The Tibetan plateau as a whole is heating up twice as fast as the global average of 1.3 F over the past century – and in some places even faster. As our planet becomes hotter, the melting of glaciers will increase incrementally as hot air holds more water molecules than cold. Natural melting of glaciers during summer and monsoon plays an important role in maintaining the flow of these rivers which feeds one-third of India's population. On a short term, we may have more water in our rivers, but slowly when the glaciers disappear, little water will be left to feed these mighty rivers.

Marq de Villiers in his book WATER WARS has said that there is enough water for everyone on this planet, it is distribution and use that are the problem. Whether we will clean up our watery mess and learn to use it sustainably, or go to war for the precious remaining clean water, only time will tell.

Asad R. Rahmani

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